

Standards of Public Land Health

Evaluation of 65083 KING PLACE EAST Allotment

[01/13/2006]

The Roswell Field Office conducted Rangeland Health Assessments at seven (7) study sites within King Place East, allotment #65083. These assessments evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within each study site location. Existing monitoring data and Ecological Site Descriptions were incorporated into and in support of these field assessments. A summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65083-DRAW-D286 (*)	X			X			N/A		
65083-MIDDLE 1-D165 (*)	X			X			N/A		
65083-MIDDLE 3-D285 (*)	X			X			N/A		
65083-NORTH 2-D166 (*)	X			X			N/A		
65083-SOUTH 2-D287 (*)	X			X			N/A		
65083-WEST 1-D284	X			X			N/A		
65083-WEST#2-D164 (*)			X			X	N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for King Place East, allotment #65083; 10 assessed soil/site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information from long-term monitoring studies on 7 study areas were utilized to assess rangeland health of public land within this allotment. These quantitative evaluations were performed by the Roswell Field office staff starting in the early 1980's. These included ground and vegetative cover and composition, production, frequency, and ecological condition as calculated from these collections which have been scheduled approximately every 5 years.

Allotment King Place East is authorized for 366 AUM's at 61% public land and classified as "I" category. Each assessment corresponds with a study site in seven separate pastures on this allotment.

West #1 Pasture is a Shallow SD-3 (Southern Desertic Basins, Plains & Mountains) ecological site, and is accessed right off Buffalo Valley Road. Encompassing 254 acres (103 hectares), this

site sits on Tencee (Te) gravelly sandy loam on surface and subsoil, nearly level to gently sloping east of the Pecos River on uplands. Slope is 1 to 9% on very shallow to shallow to indurated caliche, 6 to 20 inches (15 to 51 cm) and well-drained. Soil profile is strongly calcareous and moderately alkaline throughout. Elevation is 3,400 ft/1,030 m to 4,200 ft/1,272 m. This soil formed in gravelly and cobbly alluvium on uplands. There is evidence of recent livestock use at conservative to moderate levels. An absence of grama grass is notable with replacement by tridens (*Tridens* spp.), burrograss (*Scleropogon brevifolius*) and tobosa (*Pleuraphis mutica*) rating structural/functional groups Moderate along with annual production and invasive plants. Porcupine (*Erethizon dorsatum*) have hedged the javelinabush (*Condalia* spp.) and creosote (*Larrea tridentata*). An estimate of 300 lbs/ac or kg/ha for annual production matches the long-term average but Moderately departs from ESD parameters. Creosote is scattered and remains less than common here. Catclaw (*Acacia* spp.) is expected here but not observed. Physical and biological crusts are evident but broken in continuity. Overall this upland site gives an appearance of use, but has been evacuated according to the allottee's rotational scheme, until the onset of the next growing season. A good seed source remains with diversity of vegetation.

Draw Pasture is the only SD-3 Loamy ecological site on 784 ac (317 ha). Soil is Alama loam (Aa) series, deep and well-drained, formed in alluvium on flood plains and swales, rarely flooded. Slope is 0-3% with elevation between 3,400 ft/1,030 m and 3,600 ft/1,090 m. Livestock were observed at this draw bottom with trailing occurring towards the site from adjacent upland areas due to a common watering point. Recent disturbance from a proposed flagged gathering gas line has impacted this area. Vegetation remains intact with loamy grass species evident; blue grama (*Bouteloua gracilis*), tobosa and burrograss. Giant sacaton (*Sporobolus gigantea*) is also a characteristic grass found. Gnawing activity by porcupine on mesquite (*Prosopis glandulosa*) is very high as the mortality on this shrub is evident. Plant mortality and/or decadence is Slight to Moderate here at 20 to 30 percent. Annual production moderately deviates with 1/2 of potential in bottoms and slightly less towards upland benches surrounding. This site has characteristics of loamy, gravelly, shallow and sandy ecological sites due to azimuths headed in all directions. Invasive plants rates Moderate to Extreme due to high amounts of mesquite at the bottom with potential to dominate. Only slight departure exists for the remainder of indicators with normal range of variability with biotic, soil and hydrologic attributes commensurate with site capabilities.

South #2 Pasture is a SD-3 Shallow Sandy ecological site adjacent to Long Arroyo with 1,070 acres (433 hectares). Soil series is Simona (Sm) fine sandy loam, level to undulating well-drained, very shallow to shallow to indurated caliche, formed in aeolian and alluvial sediments on uplands east of the Pecos River. Slopes are 0 to 5% between 3,400 ft/1,030 m and 3,800 ft/1,151 m elevation. Thirty-five acres (14 hectares) in this pasture was chemically treated for shinnery oak (*Quercus havardii*) in 1987 with tebuthiuron. There was no shinnery observed at the time of this assessment. Approximately 1/2 mile (800 meters) distance lies between this study site and the prior treated area, so further evaluation may be warranted to determine this treatment's past and present effectiveness. No livestock were present at evaluation although just east of this pasture fence, cattle were utilizing the troughs and feeding areas. Bare ground is higher than expected here and results in somewhat reduced production, both rating at Moderate departure. Mesquite is common throughout and rates invasive plants Moderate to Extreme. Porcupine and jackrabbits (*Lepus californicus*) are gnawing mesquite and creosote cambium layers and causing decadence here. Gullies were observed but are mainly a function of Long Arroyo eastward. Mule deer (*Odocoileus hemionus*) were observed using these and water

troughs for food, cover and water respectively. All other indicators exhibited normal range of variability.

Middle #1 Pasture, on State land is a Sandy SD-3 ecological site on 661 acres (276 hectares) fine sandy loam. Located just south of Aberdeen Highway and ROW for a powerline, this soil association is Berino-Cacique (BE) which occurs in aeolian and alluvial deposits on uplands east of the Pecos River on 0 to 3% slopes. Elevation on this deep well-drained Berino and Cacique soil is 3,400 ft/1,030 m to 3,800 ft/1,151 m, level to nearly level and gently undulating on depressions/plane surfaces and ridges respectively. Moderate livestock use was observed as grasses like blue grama, dropseed (*Sporobolus* spp.) and vine mesquite (*Panicum obtusum*) were grazed to 1" stubble in some places. Functional/structural groups remain moderately intact with a few exceptions. A diversity of grass species litter allows for a generous layer of mulch to resist soil erosion and helps water retention. Litter amount estimates twice long-term averages and mirror Ecological Site Description (ESD) parameters. Annual production is 1/2 of expected and rates Moderate. Mesquite is common here and Moderate to Extreme ratings for invasive plants is a result. Physical crusting is broken and is only a minor component of interspaces. All other indicators fell well within normal range.

North #2 Pasture, also on State land is a Sandy SD-3 ecological site on 71 acres (29 hectares) fine sandy loam. Located just north of Aberdeen Highway and under a ROW for a powerline, this soil association is Berino-Cacique (BE) which occurs in aeolian and alluvial deposits on uplands east of the Pecos River on 0 to 3% slopes. Elevation on this deep well-drained Berino and Cacique soil is 3,400 ft/1,030 m to 3,800 ft/1,151 m, level to nearly level and gently undulating on depressions/plane surfaces and ridges respectively. Here black grama (*Bouteloua eriopoda*) has been grazed to 3" stubble. Shinnery oak, sand sage (*Artemisia filifolia*), mesquite and yucca (*Yucca* spp.) are some shrub species found. Buckwheat (*Eriogonum* spp.) and croton (*Croton* spp.) are some forbs observed. Some pedestaling was observed on threeawn and sage, but water flow patterns remain stable and short. Litter, mainly shinnery leaves and grass was displaced and piled against obstructions in many areas. Soil-ped interspace samples melted moderately rapid using soil site stability testing with similar observations made for soil surface loss of horizon layers. Considering these changes, plant community composition and distribution relative to infiltration and runoff has only been minorly affected and rates Slight to Moderate. A weak physical crust with some organic matter content has held soil in place suggesting erosional processes however dynamic are not an adverse threat to this site. This is evidence of a generous layer of litter which was estimated at 50% of ground cover readings utilizing step-point methods. Invasive plants is Moderate to Extreme by ocularly estimating mesquite, is common throughout. A portion of wildlife habitat is in less than satisfactory condition with grasses not at heights adequate for quail (*Callipepla* spp.) and other species' cover. Shrubs present more than make up for lack of cover. No special status species concerns exist here.

Middle #3 Pasture study site is predominantly private. Only approximately 104 acres (42 hectares) public land skirts this rectangular-shaped pasture surrounding a significant playa with a Alama loam, characteristic of swales. The ecological site is SD-3 Sandy on a Sotim (So) soil phase, fine sandy loam formed in alluvium on uplands, level to nearly level. Slopes are 0 to 5% with an elevation between 3,400 ft/1,030 m and 3,900 ft/1,181 m. Some subsoil and substratum of light sandy clay loam similar to Sotim soil can be found in small areas. Soil profile however is moderately calcareous in surface layers and upper region of subsoil, strongly calcareous below and moderately alkaline throughout. No livestock were observed at evaluation, but it appears that sideoats (*Bouteloua curtipendula*) has been 90 -100% utilized. Some elevation was apparent on

the half- shrubs and was restricted to flow paths. Some gullying was observed with some minor headcuts and indications of active erosion. Some vegetation was however intermittent on those low slopes and in bed of playa. Bare ground was high for this area so close to the playa, with an estimate of 60%. These soil and hydrologic attributes are eroding gradually, and suggests high water periodically floods this site from the playa, after receiving runoff from upland areas. Annual production was only 1/2 of potential with an estimate of 400 lbs/ac or kg/ha. Mesquite was common throughout with some four-wing saltbush (*Atriplex canescens*). Porcupine were also hedging this shrub and bark. Mule deer, quail, jackrabbits (*Lepus californicus*) and other forms of wildlife congregate here to utilize the playa both for food, water and cover. Scissor-tailed flycatchers (*Tyrannus forficatus*) were observed at the junction of Aberdeen and Buffalo Valley and perched on mesquite and other trees. Some salt cedar (*Tamarix* spp.) is found in the playa itself, but at a distance from this study site. Remainder of indicators assessed fell well within normal range of variability.

West #2 Pasture, encompasses 635 acres (257 hectares) on a Pajarito-Pintura (Pb) soil complex that occurs on uplands and fans below indurated caliche breaks east of the Pecos River. Slopes are 1 to 15% on 3,400 ft/1,030 m to 3,900 ft/1,181 m elevation. This soil formed in aeolian and alluvial sediments and is deep and well-drained. Pajarito soil is nearly level to gently sloping in windblown areas. Profile for this soil complex is slightly and strongly calcareous in surface and substratum layers respectively and moderately alkaline throughout. Undulating to rolling Pintura soil is on rounded to oval hummocks about 5 to 50 ft/1.5 to 15.1 m in diameter and 4 to 8 ft/1.2 to 2.4 m high. These hummocks are partially stabilized by brush and sparse grass and are a product of recent, wind deposited materials on uplands being slightly alkaline with a noncalcareous soil profile. Presently this fine sandy loam is eroded with very limited potential for recovery. Water flow patterns were very numerous with deposition and cut areas common. These patterns are occasionally connected and meander around mesquite dunes with active pedestaling on some isolated four-wing saltbush shrubs in flow paths. Wind-scoured blowouts are common here and horizon loss has occurred on this eroded soil. Runoff is rapid due to soil loss, with overland flow not allowing for adequate infiltration. Bare ground, estimated consistently at 80 to 90% and rates at Moderate to Extreme departure and approaching Extreme values. Lack of a plant community and functional/structural groups has augmented reduced infiltration and runoff. Mesquite and snakeweed (*Gutierrezia sarothrae*) are the only plants found here with virtually no perennial grass cover or production. No livestock were observed, as no forage is available. Bush muhly (*Muhlenbergia porteri*), a typical decreaser grass is non-existent, is usually found within branches of mesquite. All these indicators exceeded what is expected and deviate between Moderate to Extreme and Extreme for most of this site. The only production observed is mesquite estimated at 100-200 lbs/ac or kg/ha. An increasing canopy cover of mesquite has inhibited perennial grass production here. Historically, this site has not produced much grass, but has gradually declined due to it's eroding nature and not a product of livestock or wildlife. However porcupine use is heavy on mesquite bark here and continues. Porcupine have utilized mesquite in and around the dunes and contribute to plant mortality/decadence with Moderate departure. Some deer tracks were observed as these ungulates use this site for cover and travel due to the size of mesquite hummocks and corridors between them. A portion of wildlife habitat is in less than satisfactory condition and rates those indicators Moderate. Populations however are stable and pass through this area to access the agricultural fields west and uplands adjacent and surrounding.

Wildlife - Evaluation of the integrity of biotic community considered several indicators as attribute indices for this area of interest. Biotic indicators are interrelated with several other

indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as functional/structural groups and plant mortality & decadence. In addition to these standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation.

For all evaluated areas, wildlife habitat and population indicators rate Slight to Moderate and Moderate primarily for desert mule deer and pronghorn (*Antilocapra americana*) and a variety of game/non-game terrestrial species, including raptors and migratory birds which may utilize the uplands next to the Pecos River corridor as well as upland avians. Some areas do however exhibit some Moderate departure but not on a consistent basis. With respect to special status species, none are known to occur in this area of interest at this time and habitat and population indicators are, therefore rated None to Slight.

In the professional opinion of Assessment Team, the majority of public land within King Place East, allotment #65083 meets Upland and Biotic Standards. West #2 Pasture however does not meet the Upland and Biotic Standards as a number of indicators with soil, hydrologic and biotic attributes approach and/or exceed significant departure.

There are no Riparian issues present, therefore this standard was not addressed. See site notes and recommendations for further information regarding the assessments on this allotment, and specifically those for West #2 Pasture.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Water Flow Patterns
- Pedestals and/or Terracettes
- Bare Ground
- Wind-scoured, Blowouts, and/or Deposition Areas
- Soil Surface Loss or Degradation
- Plant Community Composition and Distribution Relative to Infiltration and Runoff
- Functional/Structural Groups
- Annual Production
- Invasive Plants

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Recommendations: Current management should continue for this allotment in regards to rotation and water distribution. However shrub encroachment problems have manifested themselves in some areas and are naturally continuing. All watering points are wisely placed for even livestock distribution.

Pastures of concern on this allotment are those with mesquite and creosote encroachment, which has reduced the amount and quality of available forage and contributed to range deterioration. Measures could be taken prescribing some brush treatments and restore those areas to a healthier state for the benefit of livestock, wildlife and watershed improvement. Dry conditions currently

have also augmented this problem. With timely brush treatments, ie, in conjunction with favorable precipitation events, those sites with brush encroachment problems and potential for recovery can be improved long-term. These steps can be accomplished with a Cooperative Agreement between BLM and the allottee, including a stipulation that at least 2 growing seasons rest would be implemented to maximize any herbicide treatment's effectiveness.

West #2 Pasture is the site of major concern. Residual vegetation, organic matter and other factors are lacking for adequate site protection. Because to this site's eroded soil, the potential for erosion is greater. An absence of species groups on this site must be taken into account. It is recommended this pasture be evaluated further for alternative management options. Brush control, using herbicide may not be an option for this site due to: 1. Eroded nature of this soil complex has left a majority of the area void of topsoil and a viable seed source, therefore leaving little potential for site recovery. 2. This site's proximity to agricultural fields may significantly limit treatments with chemical application.

Mitigative measures to assess and reduce ground water impacts should be undertaken and evaluated before chemical treatment is considered. This possibility will be evaluated further to ensure ground water and agricultural fields will not be impacted. In the event impacts are likely, an alternate location for mesquite treatment will be considered. At most, recommend this site be a prime candidate for study/demo for herbicide treatment on mesquite and possible seeding in the event impacts are not likely to occur.

Additional evaluations and monitoring should be performed in the near future, quantitatively as well as qualitatively to justify this site's and the allotment as a whole current assessment.

As of January 2009 spike treatments (teb pellets) to control creosote dominated pastures was applied by fixed-wing on approximately 875 acres (354 hectares) public land on this allotment. Pastures treated were Middle #2, West #1 & #2, and Draw.

All pastures with mesquite encroachment have been identified and are tentatively scheduled for aerial application of Reclaim/Remedy in June of 2010. The allottee would be willing to evacuate his entire allotment in efforts to cooperate with BLM and NRCS to control all brush causing a problem. The allottee also has been notified that these broad landscape projects are totally funding dependent. BLM will remain in close contact with this individual in the event funding becomes available closer to our six week window for mesquite treatments starting in June of 2010.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65083-DRAW-D286			
Legal Land Desc	SWSE 29 0140S 0270E Meridian 23	Acreage	784
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007070 LONG		
Observers	NAVARRO/ARTHUN	Observation Date	01/17/2006
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	Aa	Soil Taxon Name	ALAMA
Texture Class	NM666 L	Soil Phase	ALAMA
Texture Modifier	NM666 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	<p>Livestock are present utilizing the draw. A flagged strip for a proposed pipeline exists for a future gathering system. A road accesses the site and this gathering line will more than likely follow this two-track.</p> <p>Porcupine are gnawing the mesquite bark causing some mortality here.</p>		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:	Bareground is estimated at 50%.					

S H	Gullies				X	
Comments:	Some formation off road and towards the upland at the Torriorhents towards the north.					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:	Some displacement and movement.					
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Only minor affects exist.					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence				X	
Comments:	Some decadence on mesquite and four-wing.					
H B	Litter Amount					X
Comments:	50% is the current estimate.					
B	Annual Production			X		
Comments:	500 lbs/ac or kg/ha for draw and 300 lbs/ac or kg/ha for the upland is current estimate.					
B	Invasive Plants		X			
Comments:	Mesquite is common throughout.					
B	Reproductive Capability of Perennial Plants				X	
Comments:	Slight limitations exist for shrub component. Porcupine are gnawing at the mesquite bark quite heavily. Cattle have utilized the grama component in some places.					
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crusts exist.					
B	Wildlife Habitat				X	
Comments:	Lagomorphs in abundance.					

B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	No special status present.					
B	Special Status Species Populations					X
Comments:	No special status present.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3
H	Hydrologic	0	0	0	8	3
B	Biotic	0	1	1	7	4

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		1	1	11

Site Notes: This site is a combination of shallow, loamy, gravelly and sandy ecological sites. Higher production is observed for the draw where loamy soil exists. Lower for upland and production decreases towards the southern portion where a bench is evident. Livestock are present and utilizing the draw area grazing on grama and dropseed. There is a water trough present in this pasture. The draw is mainly tobosa and mesquite.

A proposed gathering gas pipeline intersects the transect towards the northwest at approximately 1/2 it's length. No issues exist regarding this action due to the ROW width not compromising the actual trend plot location.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65083-MIDDLE 1-D165			
Legal Land Desc	SWSE 16 0140S 0270E Meridian 23	Acreage	661
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060007070 LONG		
Observers	NAVARRO/ARTHUN	Observation Date	01/23/2006
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	BE	Soil Taxon Name	BERINO
Texture Class	NM666 FSL	Soil Phase	BERINO-CACIQUE
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Moderate use by livestock is present.		

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:	50% is the current estimate.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or					X

	Deposition Areas					
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	Some moderate departure.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	40% is the current estimate.					
B	Annual Production			X		
Comments:	Only 1/2 of potential exists.					
B	Invasive Plants		X			
Comments:	Mesquite is common.					
B	Reproductive Capability of Perennial Plants				X	
Comments:	Some moderate use by livestock is restricting some of this capability.					
S	Physical/Chemical/Biological Crusts			X		
Comments:	A weak physical crust exists.					
B	Wildlife Habitat			X		
Comments:						
B	Wildlife Populations			X		
Comments:						
B	Special Status Species Habitat					X
Comments:	No special status species present.					
B	Special Status Species					X

	Populations					
Comments:	No special status species present.					
Part 3. Summary						
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.						
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	5	4
H	Hydrologic	0	0	0	7	4
B	Biotic	0	1	4	3	5
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.						
Attribute	Rationale	Does Not Meet	May Need More Info	Meets		
Soil		0	1	9		
Hydrologic		0	0	11		
Biotic		1	4	8		
Site Notes: This pasture is in fair condition and in need of rest. Different perennial grass seed source is present, but moderate use by livestock has left some plants at 1-3" stubble. A proposed herbicide treatment for mesquite is recommended before this plant dominates and compromises grass production.						

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65083-MIDDLE 3-D285			
Legal Land Desc	SENE 19 0140S 0270E Meridian 23	Acreage	104
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060007070 LONG		
Observers	NAVARRO/ARTHUN	Observation Date	01/17/2006
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	So	Soil Taxon Name	SOTIM
Texture Class	NM666 FSL	Soil Phase	SOTIM
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Past use by livestock but not recently. Jackrabbits and porcupine are utilizing the bark from mesquite causing some mortality. Some disturbance from flooding events appears to erode some of the soil as evidenced by active gullyng. Sideoats is the grass heavily utilized here, along with vine mesquite.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:	Some elevated half-shrubs were observed.					
S H	Bare Ground			X		
Comments:	60% is the current estimate.					

S H	Gullies			X		
Comments:	A few areas have gullying creating headcuts.					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence				X	
Comments:	Some mortality on shrubs makes the site appear decadent, but the mesquite and other vegetation is only dormant and in some places gnawed by lagomorphs and porcupine.					
H B	Litter Amount				X	
Comments:	Current estimate is 30%.					
B	Annual Production			X		
Comments:	400 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants		X			
Comments:	Mesquite and snakeweed are common.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical/bio crusts evident but continuity is broken.					
B	Wildlife Habitat				X	
Comments:	Plenty of cover is present.					
B	Wildlife Populations				X	

Comments:						
B	Special Status Species Habitat					X
Comments:						
B	Special Status Species Populations					X
Comments:						

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	2	5	3
H	Hydrologic	0	0	2	7	2
B	Biotic	0	1	1	8	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	2	8
Hydrologic		0	2	9
Biotic		1	1	11

Site Notes: This site is on private land adjacent to a playa that is wet only at certain times during the year. No livestock were present, however past use indicates heavy use on sideoats, vine mesquite and dropseed. Porcupine are gnawing the mesquite bark causing some mortality. Some gullyng is evident but only in isolated areas.

A mosaic of shrub, grass and forbs is present to provide adequate cover and forage for wildlife.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65083-NORTH 2-D166			
Legal Land Desc	NESW 16 0140S 0270E Meridian 23	Acreage	71
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060007070 LONG		
Observers	NAVARRO/ARTHUN	Observation Date	01/23/2006
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	BE	Soil Taxon Name	BERINO
Texture Class	NM666 FSL	Soil Phase	BERINO-CACIQUE
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:			

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:	Some elevation on sage and threeawn.					
S H	Bare Ground				X	
Comments:	50% is the current estimate.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or					X

	Deposition Areas					
Comments:						
H	Litter Movement			X		
Comments:	Shinnery leaves and grass stalks up against obstructions.					
S H B	Soil Surface Resistance to Erosion			X		
Comments:	Rather rapid melting of interspace soil sample.					
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	Only minor deviations exist.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	50% is the current estimate.					
B	Annual Production				X	
Comments:	500 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants		X			
Comments:	Mesquite is common.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	A weak physical crust exists with reduced o.m.					
B	Wildlife Habitat			X		
Comments:						
B	Wildlife Populations			X		
Comments:						
B	Special Status Species Habitat					X
Comments:						
B	Special Status Species					X

	Populations					
Comments:						
Part 3. Summary						
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.						
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	5	4
H	Hydrologic	0	0	2	5	4
B	Biotic	0	1	3	4	5
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.						
Attribute	Rationale	Does Not Meet	May Need More Info	Meets		
Soil		0	1	9		
Hydrologic		0	2	9		
Biotic		1	3	9		
Site Notes:						

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65083-SOUTH 2-D287			
Legal Land Desc	NENW 28 0140S 0270E Meridian 23	Acreage	1070
Ecosite	042CY002NM SHALLOW SANDY SD-3	Photo Taken	Y
Watershed	13060007070 LONG		
Observers	NAVARRO/ARTHUN	Observation Date	01/23/2006
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	Sm	Soil Taxon Name	SIMONA
Texture Class	NM666 FSL	Soil Phase	SIMONA
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	No livestock present, but there is a pipeline traversing the pasture and jackrabbits and porcupine have utilized shrub component. Mule deer were observed at drinking troughs. The road follows a powerline ROW north to south.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground			X		

Comments:	50-60% is the current estimate.					
S H	Gullies				X	
Comments:	Gully formation on eastern edge on other side of fence off upand into Long Arroyo.					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:	Pebbles and gravel surfacing.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	Most of vegetational groups are present but not in good condition.					
B	Plant Mortality/Decadence				X	
Comments:	Hedging by porcupine and jackrabbits on creosote and dropseed is dead in some areas.					
H B	Litter Amount					X
Comments:	40% is the current estimate.					
B	Annual Production			X		
Comments:	Only 1/2 of potential exists.					
B	Invasive Plants		X			
Comments:	Mesquite is common.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:						

B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	No special status species concerns exist.					
B	Special Status Species Populations					X
Comments:	No special status species concerns exist.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	6	3
H	Hydrologic	0	0	1	7	3
B	Biotic	0	1	1	7	4

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	1	10
Biotic		1	1	11

Site Notes: Mesquite and snakeweed are quite common with potential to dominate. No livestock present but are just on the other side of fence. Gullies are present easterly as the upland leads into Long Arroyo. Livestock have utilized some of the grasses to 1-2" stubble. Jackrabbits and porcupine have hedged the creosote and give this plant a decadent appearance. Mule deer are utilizing this area for food, water and cover. The site is accessible by two-track following a powerline .

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 65083-WEST 1-D284

Legal Land Desc	NWNE 19 0140S 0270E Meridian 23	Acreage	254
Ecosite	042CY025NM SHALLOW SD-3	Photo Taken	Y
Watershed	13060007070 LONG		
Observers	NAVARRO/ARTHUN	Observation Date	01/17/2006
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	Te	Soil Taxon Name	TENCEE
Texture Class	NM666 GR-SL	Soil Phase	TENCEE
Texture Modifier	NM666 GRAVELLY SANDYLOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Porcupine, jackrabbits and livestock are utilizing this pasture. Porcupine on the condalia, creosote and some mesquite. Livestock on the decreaser grass species. The bush muhley has been utilized quite heavily here.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:	Current estimate is 50%.					

S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion					X
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Minor effects on infiltration rates.					
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups			X		
Comments:	Some moderate changes have occurred.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Current estimate is 40%.					
B	Annual Production			X		
Comments:	Only 1/2 of potential is present.					
B	Invasive Plants			X		
Comments:	Creosote is scattered.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Bio/physical crusts observed with breaks in continuity.					
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	
Comments:						

B	Special Status Species Habitat					X
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Comments: No special status species concerns exist.

B	Special Status Species Populations					X
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Comments: No special status species concerns exist.

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	6	4
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	3	4	6

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	3	10

Site Notes: Trend plot was re-set. This site appears to be moderately grazed and is located adjacent to 2 water lines. Porcupine have hedged the condalia and other shrubs. Stands of sideoats were recorded along with vine mesquite. This site has large amounts of gravel. Jackrabbits were also observed. The typical shallow upland vegetation remains with dyssodia, buckwheat, tridens, snakeweed and yucca being just some of the different types of vegetation on site.

RFOs Upland and Biotic Standard Assessment Summary Worksheet						
SITE 65083-WEST#2-D164						
Legal Land Desc	NESE 30 0140S 0270E Meridian 23	Acreage		635		
Ecosite	042CY004NM SANDY SD-3	Photo Taken		Y		
Watershed	13060007070 LONG					
Observers	NAVARRO/ARTHUN	Observation Date		01/17/2006		
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad				
Soil Map Unit	Pb	Soil Taxon Name		PAJARITO		
Texture Class	NM666 FSL	Soil Phase		PAJARITO-PINTURA		
Texture Modifier	NM666 FINE SANDY LOAM,ER					
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation				
NOAA Annual Precipitation	12.59	NOAA Growing Season Precipitation		8.93		
NOAA Avg Annual Precipitation	12.38	NOAA Avg Growing Season Precipitation		10.43		
Disturbances and Animal Use:	This site is along a powerline by a paved road. No livestock were observed although jackrabbits and porcupine are gnawing on the mesquite bark.					
Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:	no rills seen					
S H	Water Flow Patterns		X			
Comments:	Patterns are long and connected between dunes.					
S H	Pedestals and/or Terracettes		X			
Comments:	Pedestals occurring on shrubs; rather large coppice dunes have elevated the mesquite. One four-wing was observed and is pedestaled.					
S H	Bare Ground	X				
Comments:	Current estimate is 80-90%, exceeding the long-term average and ESD					

	significantly.					
S H	Gullies				X	
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas		X			
Comments:	There so many barren patches that it appears moonscape; very common.					
H	Litter Movement			X		
Comments:	Mesquite leaves have piled up against obstructions.					
S H B	Soil Surface Resistance to Erosion			X		
Comments:	Ped samples for interspace melted very rapidly indicating no O.M. or biological crust to hold soil in place. Physical crusts are the only thing holding soil in place.					
S H B	Soil Surface Loss or Degradation		X			
Comments:	There is significant soil loss throughout this site. Large expanses of areas where soil has either blown or washed away.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff		X			
Comments:	negatively affected					
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups	X				
Comments:	Grass is missing. Only mesquite and snakeweed remain with occasional four-wing present and one threeawn.					
B	Plant Mortality/Decadence			X		
Comments:	Evidence was seen of possibly porcupine utilizing the mesquite bark.					
H B	Litter Amount			X		
Comments:	Current estimate is 10-20% and mostly is mesquite leaves in dunes.					
B	Annual Production	X				
Comments:	Current estimate is 100-150 lbs/ac or kg/ha. Less than 1/5 of the potential is present, mostly made up of mesquite.					
B	Invasive Plants	X				
Comments:	Mesquite dominates the site.					
B	Reproductive Capability of Perennial Plants			X		
Comments:	Limited capability to produce seed and tillers is evident.					
S	Physical/Chemical/Biological Crusts			X		
Comments:	Physical crust keeps interspace barely intact.					

B	Wildlife Habitat			X		
Comments:	Porcupine gnawing on the mesquite is evident.					
B	Wildlife Populations			X		
Comments:	Portions are in less than satisfactory condition.					
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					X
Comments:	N/A					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	1	4	2	2	1
H	Hydrologic	1	4	3	2	1
B	Biotic	3	1	6	1	2

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Whatever soil is present is being protected by a weak physical crust. No grass is present to hold soil in place. Mesquite dunes are the only areas where soil has built up. There is virtually no resistance to erosion here as indicated by rapid melting of soil ped samples.	5	2	3
Hydrologic	Bare ground is consistently estimated at 80-90%. Infiltration has been compromised. Horizon loss is obvious, with an occasional four-wing elevated way above ground level. Water flow patterns have coursed in between dunes and are long and connected	5	3	3
Biotic	There is virtually no grass production. F/S groups are missing with mesquite and snakeweed dominating.	4	6	3

	Mortality on mesquite and other shrubs has been augmented by heavy porcupine use.			
<p>Site Notes: Mesquite dominates this site along with snakeweed. No grass is present but an occasional four-wing may be observed. Production is virtually non-existent. No functional groups remain. No livestock were present. Porcupine have gnawed at the mesquite bark even on top of coppice dunes. Only corridors between mesquite are present. This site is a prime candidate for study/demo site for herbicide treatment for mesquite and possibly seeding. Due to this site's proximity to agricultural fields, this application may be limited however. There appears to be no seed source for grass, as not even bush muhly is growing in between the branches of mesquite.</p> <p>Inter-dunal areas are erosion pavement in nature, but with physical crusting keeping whatever soil is left in place. This soil is severely eroded with very little potential for recovery.</p>				

Determination of Public Land (Rangeland) Health for 65083 KING PLACE EAST

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the King Place East allotment, 65083, meets the (1) Upland Sites Standard, (2) Biotic Communities, including Native, Threatened, Endangered and Special Status Species Standard and (3) Riparian Standard.

Causal Factor:

Due to the soil nature in West #2 Pasture, there remains very little potential for recovery and virtually no seed source. West #2 Pasture's continuing eroded soil conditions is the causal factor for not meeting Upland and Biotic Standards. Extensive external input is required to even remotely initiate recovery measures for this pasture to meet any standards. This is an eroded site with little or no potential for recovery. Historically, this site has not produced much grass, but has continuously declined due to it's eroding nature and not a product of livestock management, climatic conditions, human influences or wildlife.

Rangeland health assessments conducted in January 2006 indicate nearly every soil, hydrologic and biotic attribute for all indicators are not meeting the Upland and Biotic Standards. Monitoring conducted approximately every 5 years also indicates this site has been declining regardless of management or favorable weather conditions.

This site is also being encroached by mesquite (*Prosopis* spp.) invasion, which has augmented the already deteriorated condition. The invasive indicator is rapidly approaching dominate proportions. This in combination with an eroding soil nature and dry conditions have contributed to poor range condition. During drought conditions deep-rooted mesquite out-competes fibrous rooted herbaceous plants for available water and nutrients. This has led to reduced perennial grass production, virtually no forb growth, higher than normal plant mortality and decadence, increased erosion and overall range deterioration.

/s/ J. Howard Parman
Acting Assistant Field Manager

03/31/2010
Date

